

Appl. No. 09/940,266

Amdt. AP dated August 24, 2004

Reply to Final Office Action of March 24, 2004

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1-120. (Cancelled)

121. (Currently Amended) A method of treating an abnormal ~~sinus~~ cardiac rhythm comprising:

providing an implantable stimulus device in a patient, the implantable stimulus device including a power source and an energy storage system;

providing a lead system for the stimulus device, the step of providing the lead system including a process resulting in implantation of the leads only to areas that are exclusive of the patient's heart;

sensing an event in the patient's ~~sinus~~ cardiac rhythm;

coupling the power source to the energy storage system to transfer energy to the energy storage system;

storing energy in the energy storage system; and

discharging the energy from the energy storage system using the lead system to a subcutaneous volume of the patient;

wherein the lead system includes a first electrode and the implantable stimulus device includes a second electrode on a housing thereof, wherein the steps of providing the stimulus device and providing the lead assembly are performed such that a straight line drawn from the first electrode to the second electrode would intersect a portion of the heart, and the step of discharging energy from the energy storage system includes discharging energy between the first electrode and the second electrode.

122. (Currently amended) The method of claim 121, wherein the step of sensing an event in the patient's ~~sinus~~ cardiac rhythm is performed in order to detect an abnormally fast heart rhythm.

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123. (Previously Presented) The method of claim 122, wherein:

the steps of storing energy and discharging the energy are repeated at an initial rate set to overdrive the abnormally fast heart rhythm until the heart is captured for pacing purposes; and, then,

a rate at which the steps of storing energy and discharging energy are performed is reduced.

124. (Previously Presented) The method of claim 123, wherein the initial rate is in the range of 100 to 300 stimuli per minute.

125. (Previously Presented) The method of claim 121, wherein the step of providing an implantable stimulus device includes implanting the stimulus device subcutaneously between approximately the third rib and the twelfth rib of the patient.

126. (Previously Presented) The method of claim 121, wherein the step of providing an implantable stimulus device includes implanting the stimulus device at about the left axillary line with the lead system including a lead extending medially therefrom.

127. (Previously Presented) The method of claim 121, wherein the step of providing an implantable stimulus device includes placing the stimulus device at a subcutaneous location along the inframammary crease of the patient.

128. (Currently Amended) The method of ~~claim 121~~ claim 133, wherein the lead system includes a first electrode and the implantable stimulus device includes a second electrode on a housing thereof, wherein the steps of providing the stimulus device and providing the lead assembly are performed such that a straight line drawn from the first electrode to the second electrode would intersect a portion of the heart, and the step of discharging energy from the energy storage system includes discharging energy between the first electrode and the second electrode.

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129. (Previously Presented) The method of claim 121, wherein the step of discharging the energy is performed to produce a biphasic waveform.

130. (Currently amended) A method of treating tachycardia comprising:

providing an implantable stimulus device subcutaneously in a patient to a location at approximately the left anterior axillary line of the patient between the third and the twelfth ribs, the implantable stimulus device including a power source and an energy storage system;

providing a lead system for the stimulus device by passing the lead system to locations exclusive of the patient's heart;

sensing events in the patient's ~~sinus~~ cardiac rhythm to determine whether an abnormally fast heart rhythm is occurring; and, if so, repeating the following steps at an initial rate to overdrive the abnormally fast heart rhythm:

coupling the power source to the energy storage system to transfer energy to the energy storage system;

storing energy in the energy storage system; and

discharging the energy from the energy storage system via first and second electrodes disposed within the patient exclusive of the patient's heart, in a biphasic waveform;

and then repeating the steps at a reduced rate.

131. (Previously Presented) The method of claim 130, wherein both the first and second electrodes are part of the lead system.

132. (Previously Presented) The method of claim 130, wherein the first electrode is part of the lead system and the second electrode is disposed on a housing for the implantable cardioverter-defibrillator.

133. (New) A method of treating an abnormal cardiac rhythm comprising:

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providing an implantable stimulus device in a patient, the implantable stimulus device including a power source and an energy storage system;

providing a lead system for the stimulus device, the step of providing the lead system including a process resulting in implantation of the leads only to areas that are exclusive of the patient's heart;

sensing an event in the patient's cardiac rhythm;

coupling the power source to the energy storage system to transfer energy to the energy storage system;

storing energy in the energy storage system; and

discharging the energy from the energy storage system using the lead system to a subcutaneous volume of the patient; wherein:

the step of sensing an event in the patient's cardiac rhythm is performed in order to detect an abnormally fast heart rhythm; and

the steps of storing energy and discharging the energy are repeated at an initial rate set to overdrive the abnormally fast heart rhythm until the heart is captured for pacing purposes and, then, a rate at which the steps of storing energy and discharging energy are performed is reduced.

134. (New) A method of treating an abnormal cardiac rhythm comprising:

providing an implantable stimulus device in a patient, the implantable stimulus device including a power source and an energy storage system;

providing a lead system for the stimulus device, the step of providing the lead system including a process resulting in implantation of the leads only to areas that are exclusive of the patient's heart;

sensing an event in the patient's cardiac rhythm;

coupling the power source to the energy storage system to transfer energy to the energy storage system;

storing energy in the energy storage system; and

discharging the energy from the energy storage system using the lead system to a subcutaneous volume of the patient;

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wherein the step of providing an implantable stimulus device includes implanting the stimulus device at about the left axillary line with the lead system including a lead extending medially therefrom.

135. (New) A method of treating an abnormal cardiac rhythm comprising:

providing an implantable stimulus device in a patient, the implantable stimulus device including a power source and an energy storage system;

providing a lead system for the stimulus device, the step of providing the lead system including a process resulting in implantation of the leads only to areas that are exclusive of the patient's heart;

sensing an event in the patient's cardiac rhythm;

coupling the power source to the energy storage system to transfer energy to the energy storage system;

storing energy in the energy storage system; and

discharging the energy from the energy storage system using the lead system to a subcutaneous volume of the patient;

wherein the step of providing an implantable stimulus device includes placing the stimulus device at a subcutaneous location along the inframammary crease of the patient.